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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,370	01/23/2004	Patrick S. Livingston	091393-9202	7577

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EXAMINER

NASH, BRIAN D

ART UNIT PAPER NUMBER

3721

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/763,370	<b>Applicant(s)</b> LIVINGSTON ET AL.	
	<b>Examiner</b> Brian Nash	<b>Art Unit</b> 3721	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 June 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/23/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4 and 8-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Internet Article “Titanium Takes to the Air-Air Tools, that is” to Ogando (hereinafter Ogando). Ogando discloses a rigid containment structure for housing a handheld, pneumatic, impact-tool comprised of titanium and titanium alloy and manufactured by casting.

The examiner notes that Ogando’s article was published 4/12/2003 and the filing date of this application is 1/23/2004; however, the last line of the article states that Ingersoll-Rand received “record bookings since January” according to Michael McCalley, Ingersoll-Rand’s Worldwide Product Manager for Vehicle Service Solutions. Therefore, the tool disclosed in the article to Ogando was on sale in this country prior to January 2003 and therefore more than one year prior to the date of application for patent in the US.

The examiner also notes that claims 3 and 10 are product by process claims and that the product itself, i.e. the containment structure, does not depend on the process of making it, i.e. manufactured by casting.

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3. Claims 1-4 and 8-12 are rejected under 35 U.S.C. 102(b) as being anticipated by US 6,149,356 to Chu et al. Chu et al disclose a rigid containment structure for housing a handheld, pneumatic, impact-tool comprised of titanium and titanium alloy and manufactured by casting (see Figs. 1,2 and column 2, lines 51-58).

*Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,149,356 to Chu et al in view of US 6,227,866 to Williams et al. As discussed above, Chu et al disclose the invention substantially as claimed, but do not explicitly show the titanium alloy to be one of Ti-6Al-4v, Ti-3Al-2.5V and Ti-4Al-2V. However, Williams et al teach the use of a titanium alloy such as Ti-6Al-4V for the fabrication of a housing. It would have been obvious to one having ordinary skill in the art to have used the particular titanium alloy such as Ti-6Al-4V to fabricate a housing, i.e. a containment structure, for the purpose making it lightweight, of high strength, corrosion resistant and at reduced size and weight.

6. Claims 6-7 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogando and US 6,149,356 to Chu et al. As discussed above, both Ogando and Chu et al clearly disclose the invention substantially as claimed. Neither Ogando nor Chu et al explicitly state the titanium alloy to have an ultimate tensile strength approximately 90 Ksi to 130 Ksi and a yield

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strength of approximately 70 Ksi to 120 Ksi or a maximum density of 0.16 lbs/cu in. However, it would have been obvious to one skilled in the art to configure/modify the titanium alloy used to manufacture the tool housing to such specific parameters, since such a modification is within the engineering purview of the skilled artisan concerned with constructing a fully functioning impact tool that utilizes a titanium alloy for the housing and is required to meet certain design parameters. Further support for this reasoning is found in the extensive testing performed by the engineers at Ingersoll-Rand as disclosed in the publication to Ogando.

***Conclusion***


7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wirth, Beaupre et al, Gage et al, Barnes, and Harbin et al are cited to show related references.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Nash whose telephone number is 571-272-4465. The examiner can normally be reached on Monday – Thursday from 8 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi I. Rada can be reached at 571-272-4467.

The official fax number for this Group is: 703-872-9306

Brian Nash  
4 February 2005



**Rinaldi I. Rada**  
**Supervisory Patent Examiner**  
Group 0